Arizona Department of Transportation

Intermodal Transportation Division

206 South Seventeenth Avenue Phoenix, Arizona 85007-3213

Janice K. Brewer
Governor

John S. Halikowski
Director

Floyd Roehrich Jr.
State Engineer

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TO: **ALL ADOT Consultants and Drainage Designers**

THRU: **ADOT Engineering Consultants Services**

RE: **Drainage Design - Pavement Drainage n-values**

This communiqué overrides a previous announcement on this subject that was issued in an email on 8/3/2010, but which reached only a small number of consultants. It addresses pavement drainage analysis in the instances where 1 inch of AR-ACFC overlay is present in the cross-section, as commonly encountered on various freeway capacity improvement projects. We are requiring that the concrete n-value = .013 occurring within 4 ft of the curb and gutter should not be ignored. The rest of the cross-section n = .016. This means that within the 4 feet the reduced n-value should be accounted for accordingly in calculations.

If modeled as above we are finding that we are reducing the number of needed catch basins in total. I think we should get more detail with the analysis and derive greater benefits to save on cost and aesthetics.

Obviously this cannot be achieved by using the formula that incorporates a constant n-value for the entire cross-section; therefore other formulas have to be derived for this application.

Please feel free to contact the Drainage Office with any questions you may have

Ken Akoh-Arrey, PE
Chief Drainage Engineer, Manager
Arizona Dept. of Transportation
Roadway Engineering Group
205 S. 17th Ave. Phoenix, AZ 85007, MD 634E
Tel (602) 712-8660
Fax (602) 712-3161

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